

CLAIMS

What is claimed is:

1. A shoe press belt having a main body with a wet web side layer comprising a high molecular weight elastic material, the wet web side layer having a hydrophobic wet web facing surface.

2. A shoe press belt according to claim 1, in which the magnitude of the hydrophobic property of the wet web facing surface is such that the contact angle between the edge of a drop of water and the wet web facing surface is at least 50°.

3. A shoe press belt having a main body with a wet web side layer comprising a high molecular weight elastic material, the wet web side layer having a wet web facing surface, in which the wet web side layer has a water holding section formed in its wet web facing surface, the water holding section having interior surfaces, and in which said wet web facing surface and at least a part of said interior surfaces of the water holding section are hydrophobic.

4. A shoe press belt according to claim 3, in which the magnitude of the hydrophobic property of each said hydrophobic surface is such that the contact angle between the edge of a drop of water and each said hydrophobic surface is at least 50°.

5. A shoe press belt having a main body with a wet web side layer comprising a high molecular weight elastic material, the wet web side layer

having a wet web facing surface, in which the wet web side layer has a water holding section formed in its wet web facing surface, the water holding section having interior surfaces, in which the wet web facing surface of said wet web side layer is hydrophilic, and in which at least a part of the interior surfaces of said water holding section are hydrophobic.

6. A shoe press belt according to claim 5, in which the magnitude of the hydrophobic property of each said hydrophobic part of the interior surfaces of said water holding section is such that the contact angle between the edge of a drop of water and each said hydrophobic part of the interior surfaces of said water holding section is at least 50° .

7. A method of manufacturing a shoe press belt comprising, as a first step, the formation of a wet web side layer of a main body of a belt from a high molecular weight, hydrophobic, elastic material, and, as a second step, the formation of a hydrophobic wet web facing surface by grinding said wet web side layer.

8. A method according to claim 7 in which said second step is followed by the step of forming a water holding section on the wet web facing surface of said wet web side layer.

9. A method of manufacturing a shoe press belt comprising, as a first step, the formation of

a wet web side layer of a main body of a belt from a high molecular weight, hydrophobic, elastic material, the wet web side layer having a wet web facing surface, as a second step, the formation of a film on said wet web facing surface, the film comprising a high molecular weight hydrophilic elastic material of hydrophilic property, and, as a third step, the formation of a water holding section extending through said film and into said wet web side layer.

10. A method of manufacturing a shoe press belt comprising, as a first step, the formation of a wet web side layer of a main body of a belt from a high molecular weight, hydrophilic, elastic material, the wet web side layer having a wet web facing surface, as a second step, the formation of a water holding section extending from said wet web facing surface into the wet web side layer, and, as a third step, the formation of a film, comprising a high molecular weight, hydrophobic elastic material, on an inner surface of said water holding section.

11. In a shoe press of a papermaking machine, a shoe press belt having a main body with a wet web side layer comprising a high molecular weight elastic material, the wet web side layer having a hydrophobic wet web facing surface.

12. A shoe press of a papermaking machine according to claim 11, in which the magnitude of the hydrophobic property of the wet web facing

surface is such that the contact angle between the edge of a drop of water and the wet web facing surface is at least 50°.

13. In a shoe press of a papermaking machine, a shoe press belt having a main body with a wet web side layer comprising a high molecular weight elastic material, the wet web side layer having a wet web facing surface, in which the wet web side layer has a water holding section formed in its wet web facing surface, the water holding section having interior surfaces, and in which said wet web facing surface and at least a part of said interior surfaces of the water holding section are hydrophobic.

14. A shoe press of a papermaking machine according to claim 13, in which the magnitude of the hydrophobic property of each said hydrophobic surface is such that the contact angle between the edge of a drop of water and each said hydrophobic surface is at least 50°.

15. In a shoe press of a papermaking machine, shoe press belt having a main body with a wet web side layer comprising a high molecular weight elastic material, the wet web side layer having a wet web facing surface, in which the wet web side layer has a water holding section formed in its wet web facing surface, the water holding section having interior surfaces, in which the wet web facing surface of said wet web side layer is hydrophilic, and in which at least a part of the

interior surfaces of said water holding section are hydrophobic.

16. A shoe press of a papermaking machine according to claim 15, in which the magnitude of the hydrophobic property of each said hydrophobic part of the interior surfaces of said water holding section is such that the contact angle between the edge of a drop of water and each said hydrophobic part of the interior surfaces of said water holding section is at least 50°.